

Work Order ID 144060

Thursday, March 31, 2016 1:01:24 PM

144060

Page 1

Item ID: D407-581-011 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Pre-Flight Folding Step Fits LH or RH
 Start Date: 3/31/2016 Start Qty: 2.00 ***2*** Cust Item ID:
 Required Date: 4/15/2016 Req'd Qty: 2.00 ***2*** Customer:
 Reference: REPLACE D4101-5 ON D4101-041 AS PER ECN 16-551

Approvals: Process Plan: *[Signature]* Date: 16-3-31 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
IIN-D206-581	D								

MLJ APR 27 2016 *[Signature]*

105 0.00

105

Small Fab

Small Fab

Memo

PULL FROM STOCK
D407-581-011 X2
B:88545

0.00

110 *[Signature]*

Realodine

REPLACE SPRING D4101-5
ON D4101-041 AS PER ECN 16-551

2 *[Signature]* 16-3-31

2x

16/04/25

DAS
36
9-89

115 QC5- Inspect part completeness to step on W/O 0.00

115

QC

Quality Control

Memo

0.00

(2)

DAS
38
9-89

APR 26 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
☐ OTHER : _____					

Work Order ID 144060

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Item ID: D407-581-011

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Pre-Flight Folding Step Fits LH or RH

Start Date: 3/31/2016 Start Qty: 2.00

2

Cust Item ID:

Required Date: 4/15/2016 Req'd Qty: 2.00

2

Customer:

Reference: REPLACE D4101-5 ON D4101-041 AS PER ECN 16-551

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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125

0.00

125

Packaging

Memo

0.00

Packaging

REPACKAGE UNDER NEW BATCH NUMBER

27

DAS
28
9-80

APR 27 2016

135

QC4- 100% Inspect kits for completeness

0.00

135

QC

Memo

0.00

Quality Control

fg 018

27 Smb

APR 27 2016

140

QC21- Final Inspection - Work Order Release

0.00

140

QC

Memo

0.00

Quality Control

MLJ

APR 27 2016

MLJ

APR 27 2016

DQA: _____ Date: _____



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Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
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Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Picklist Print

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Work Order ID: 144060

144060

Parent Item: D407-581-011

D407-581-011

Parent Item Name: Pre-Flight Folding Step Fits LH or RH

Start Date: 3/31/2016

Required Date: 4/15/2016

Start Qty: 2.00

Required Qty: 2.00

Comments: Ipp Rev:A New Issue 10-07-16 JLM Verified BY:DD
REV:B 16.03.30 NOW AT CHG002 DD VERF:JLM

IPP

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
AN525-832R6		Purchased	No				Each	140.0000		2			DAS
AN525-832R6									**			16/04/25	36 9-89
Screw													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				CA				14					
				m129682				14					
				GA				26					
				m131957				26		2			
				ST328				100					
				m134249				100					
D407-581-011		Manufactured	No				Each	0.0000		2			
D407-581-011									**			16.3.31	
Pre-Flight Folding Step Fits LH or RH													
D4101-5		Manufactured	No				Each	0.0000		2			DAS
D4101-5									**			16/04/25	36 9-89
Spring													
MS24665-231		Purchased	No				Each	161.0000		2			DAS
MS24665-231									**			16/04/25	36 9-89
cotter pin													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				ST289				161					
				113815				161		2			

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
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Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
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Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

List Lots

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144060

Criteria : Item ID: d407-581-011 All Locations All Warehouses All Quantity

Item ID	Warehouse ID	Lot Number	Last Trans Date	Lot Qty	Shelf Life Dt	Type Code	Comments
Item Name	Location ID				Lot Code		
D407-581-011	Main Warehouse	88545	6/23/2014	2.0000	QC21	CHG001	
Pre-Flight Folding Step Fits LH or RH	FG018						
Total:				2.0000			

ENGINEERING CHANGE NOTICE

DART AEROSPACE LTD

Date:	16.03.23	Job No.:	ADR Yes/No:	Y	ADR Date:	ECN #:	16- 551
Product No.:	D206-582	Created By:	WM	Approved By:			
Product Name:	Utility Equipment Installation		Checked By:				

Distribution	Reqd	Resp	Initial / Date (YY/MM/DD)
Director of Operations	N	DM	
Production Manager / Coord.	Y	MP / MF	
Purchasing Manager / Purchasing Coord.	Y	LL / CL	
Production Engineering Coord.	Y	DD / JLM	
Production Engineering Coord.	N	DL	
Customer Order Processing	N	SL / BG	

Distribution	Reqd	Resp	Initial / Date (YY/MM/DD)
DQA / QA Coord.	Y	PS / ED	
QC Coordinator	Y	PD	
Customer Support	Y	SW / LM	
Customer Technical Support	Y	MB / HS	
Marketing	N	SL / WR	
Dist. Management Coord.	N	HM	

Reason for Change:
Redesign of the pre-flight step spring material from Lexan to Delrin for improved structural performance in the field. MS24665-231 was MS24665-136.

Documents Affected:
Release D4101 rev C
Release MDL-D206-582 Revision T

IF APPLICABLE: NCR: _____ PAR: _____ CAR: _____ CIR: 15-54 URF: 15-636
PAPERWORK UPDATE ☐ PARTS MUST COMPLY ☒ PREVIOUS PARTS SATISFACTORY ☐

#	Quality Assurance Actions	Reqd	Resp	Notes	Complete
1	Notify Previous Customers	N			
2	Notify Eurocopter France	N			
3	Notify Augusta Westland	N			
4	Manufacturing Licensing Agreement Update	N			

#	Engineering Actions	Reqd	Resp	Notes	Complete
5	Required Documents/Drawings/Item ID's Under Review (URF)	Y	WM	D4101 REV C	
6	Update Master Document List (MDL)	Y	WM	MDL-206-582 REV T	
7	Update Document Record (DR)	N			
8	Update Product Compatability Matrix	N			
9	Notify TC / FAA of Change (eg. ICA, 8110-3)	N			
10					

#	Document Control Actions	Reqd	Resp	Notes	Complete
11	Move / Update Electronic Files / Design Journal	Y	KJ		16.03.29
12	Update Product Specification Files (Bluefiles)	N			
13	Update Approved/Preliminary Dwg PDF Files	Y	KJ	D4101 REV C	16.03.29
14	Update Product Development Summary (STC applications)	N			
15	Update QSI 021 (TC/FAA STC) and/or STC Approval List	N			
16	Create/Update Parts / STC Database	N			
17	Update / Verify Airworthiness Release Certificate Database	N			
18	Create / Update Change Record Form / Item Card Database	Y	KJ	See below	16.03.29
19	Create / Update Packaging Process Plan (PPP)	Y	KJ		16.03.29
20	Red Decals required on Packaging Process Plan (PPP)?	Y	KJ		16.03.29
21	Update Controlled Supplier Documents (Qpulse) Database	N			
22	Update Grey Project Binder / Electronic Project Folder	Y	KJ		16.03.29
23	Update D-Part / M-Drawing / DSI / DEO Master Binders	Y	KJ		16.03.29
24	Update "Royalty Paid to" attribute (Parts sold under Dart USA STC's)	N			
25					

Description / Action:
 D4101-041 x10 in stock. Rework w/o 144058
 Release D4101 rev C and MDL-206-582 rev T.
 Scrap Spring D4105-5 made from Lexan. D4101-5 - NO stock N/A
 Update BOM and routes per approved latest revision.
 D206-581-113/-013/-014/-015 Now at CH002 D206-581-011 x4 in stock
 D407-581-111/-011 Now at CHG002 D407-581-011 x2 in stock. - Rework w/o 144060
 Update CHG001 -111/-113/-011/-013/-014/-015 kits in stock to CH002, Update any D4101-041 with new spring D4101-5

ECN Verified & Complete: _____ Date: _____

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause			FAULT CATEGORY							
Environment ☐	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design ☐	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data ☐	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling ☐	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre ☐	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material ☐	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport ☐	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge ☐	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA ☐	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation ☐	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date ☐	☐	Manufacturing Process								
Misidentified ☐	☐	Past Due								
			OTHER : ☐							